United States Court of Appeals

for the

District of Columbia Circuit

TRANSCRIPT OF RECORD

EXHIBIT A

24548

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington 25, D. C.

FCC 55D-65

In the Matter of

Cease and Desist Order
to be directed against
C. J. COMMUNITY SERVICES, INC.
Bridgeport, Washington

518

DOCKET NO. 11332

Appearances

Mr. Richard A. Solomon and Mr. John H. McAllister of Washington, D.C., on behalf of the Federal Communications Commission; the respondent was not represented by legal counsel.1/

INITIAL DECISION OF HEARING EXAMINER J. D. BOND

Preliminary Statement

1. By order dated March 30, 1955 (released April 1), the Commission directed, "pursuant to Section 312(c) of the Communications Act of 1934, as amended," that the above-named respondent show cause why an order should not be issued commanding it and its officers or agents to cease and desist from the television booster station2/ activities hereinafter described.

1/ The respondent corporation's president, James E. Livingston, who is not an attorney, participated in the hearing on behalf of the respondent through an opening statement, cross-examination, and discussions of various objections to evidence; he also testified and presented some documentary evidence. Representative participation was permitted because counsel for the Commission expressly waived any question that might otherwise surround Mr. Livingston's so conducting the case; counsel's argument that Section 1.711 of the Commission's Rules authorizes such corporate representation was explicitly not sustained. (cf. Section 6 (a) of the Administrative Procedure Act.)

2/ A television booster station is not defined in the Commission's Rules or Standards; the Bridgeport booster station was extensively described and pictured (by six photographic exhibits) in the evidence. Basically this operation consists of mountain-top installations of receiving and transmitting antennas, with intermediate seperately powered co-channel amplifiers, which receive and amplify and redirect into Bridgeport the television signals of two Spokane stations. This operation is actually two supplemental stations as described by Commissioner Rosel H. Hyde on April 25, 1951:

> "We have not established a definition for booster stations, but the booster-station idea as presented to us by the industry contemplates a subsidiary station, a supplemental station, if you please, which would pick up the program of the basic station and rebroadcast it at some point not reached by the central station..." (Hearings before the Committee on Interstate and Foreign Commerce, House of Representatives, 82nd Congress, 1st Session, on S. 658, page 238.)

The order was based on the stated premises that: (1) the respondent is operating a television broadcast station on Channels 4 and 6 at Bridgeport, Washington without a license "as required by Section 301 of the Communications Act"; (2) the operation violates Section 318 of the Act in that it is not being carried on by a licensed operator; (3) the station is rebroadcasting programs of two named television stations in Spokane without the express authority of those stations and the respondent is thus violating Section 325(a) of the Act; and (4) the respondent has been notified in writing of the unlawful nature of its operation and afforded an opportunity to comply with lawful requirements but has failed to do so. The Commission's order directed that a hearing be held by the undersigned Hearing Examiner on May 16, 1955, and by subsequent orders the place of hearing was specified as the North Courtroom in the Chelan County Courthouse in Wenatchee, Washington. A hearing was held at the place specified on May 16 and 17, 1955, in which hearing the parties participated asindicated in the statement of appearances and in footnote 1.

2. Proposed findings of fact and conclusions of law were not required to be filed; time for the permissive filing of such pleadings was extended beyond the 20-day period allowed by the Commission's Rules. Counsel for the Commission timely filed proposed findings of fact and conclusions of law, with briefs and appendices in support thereof, and they have been considered. No pleadings were filed on behalf of the respondent after the hearing was closed on May 17, 1955.

Findings of Fact

3. Some facts about the location and characteristics of the community of Bridgeport are pertinent to the ultimate questions to be decided. The 1950 Census Reports (not in evidence) indicate that the town of Bridgeport has 802 inhabitants. The town is located in Douglas County in the valley of the Columbia River near Chief Joseph Dam; is about 110 miles east of Spokane, is about 90 miles south of the Canadian border, and lies at greater distances from the other borders of the State of Washington. Bridgeport is surrounded, except for the winding Columbia River gorge, by rugged high plateau terrain which generally is 1,000 feet or more above the elevation of the town. Its location and topography are such that it is not within the Grade A or Grade B service contour of any existing television broadcast station; an engineer for the Commission stated his opinion that Bridgeport residents would not be able to receive an acceptable television broadcast signal from any station authorized under the Commission's allocation plan, with the possible exception that signals from a favorably located transmitter at Omak-Okanogan (where unapplied for UHF Channel *35 has been allocated for use in noncommercial educational television broadcasting) might be received over the 29-mile path to Bridgeport. The evidence establishes that no usable or measurable direct television broadcast signal is present in Bridgeport, and that television broadcast service is there provided by the booster station operation herein considered.

4. In January of 1954, the president of the respondent corporation--which was not then in existence--directed an inquiry to the Commission's field office in Seattle concerning the licensing of a television booster installation for use at Bridgeport. He and other interested individuals had previously investigated the possibilities of a community antenna television system installation, (CATV), to the extent of ascertaining that CATV would cost about $28,000 and, in their opinion, would be economically impractical. Mr. Livingston was correctly advised by the Commission's reply that a co-channel amplifier or booster station as contemplated, and as subsequently installed and operated, could not be licensed under the existing Rules and Regulations. However, a Mr. Powell, who appears to be a consultant to and an honorary member of the respondent corporation and who engages to some extent in radio and television servicing, proceeded in early 1954 to install a battery-powered booster station for receiving and directing amplified Channel 4 television signals into Bridgeport; subsequently a permanent installation with commercial electric power was constructed in the summer of 1954. The booster station is located on a high hill northwest of Bridgeport so that its received signal passes generally over the town before being sent back and down into town by the array. Mr. Powell was notified by the Commission that the operation was deemed to be unlawful, and thereupon the respondent corporation was organized on a nonprofit basis and, "in order to relieve Mr. Powell of further liability in the matter," it has continued to operate and enlarge the booster installation so

as to provide receiption in Bridgeport of television programs from Spokane Stations KXLY-TV (Channel 4) and KHQ-TV (Channel 6).

5. The legal existence, organization, and governing bylaws of the respondent corporation were not formally shown in evidence, but its creation and functioning were described by Mr. Livingston. The corporation has an elected board of twelve directors, who were named, three of whom occupy the offices of president, vice-president, and secretary-treasurer. Policies of the corporation generally are made by the membership at large, and eligibility for membership extends to all residents in the Bridgeport area, depending upon "whether they are able or not to obtain TV receiption by the amplifying transmitter operated by this corporation." Mr. Livingston testified that the corporation membership authorized him to represent the respondent in the hearing and that a number, but not all, of the corporate directors attended the hearing. The respondent appears to be a nonprofit corporation having about 80 members who pay an annual fee of $5.00; capital contributions, if any, were not stated or inquired about. The corporation pays $3.00 a month to the Public Utility District for the electric power service provided to the booster station. The respondent paid Mr. Powell $1.00 for the Channel 4 booster installation, which probably had cost about $500, and in the fall of 1954 an additional subscription of $1,000 was raised by the corporation and about $950 of that sum was expended for the installation of the more elaborate Channel 6 booster which is hereinafter described.

6. The Bridgeport booster station operation does not cause objectionable interference or any interference to direct television signal receiption in Bridgeport because direct receiption is not there possible. Observable interference, evidenced by a displaced image, was made apparent by the Commission's engineers upon the home receiver of a Mr. Crabtree who then lived at an elevation higher than Bridgeport; his residence location was such that he received a good signal from the booster station and he could also receive the Spokane Channel 4 signal as it was apparently reflected from a mountain peak about 50 miles away and in a direction substantially different from either Spokane or the Bridgeport booster.3/ The intereference phenomenon there was experimentally developed by rotating Mr. Crabtree's directional receiving antenna between the directions of the booster and the reflected signal from Spokane; the displaced image or "ghost" was not present on Mr. Crabtree's receiver when the antenna was oriented towards either the mountain peak or the Bridgeport booster. The Bridgeport booster operation does not cause electrical interference with any other existing radio or television although the engineers stated that there exist areas on the fringe of the booster radiation pattern where co-channel interference could not be tuned out by antenna adjustment or receiver selectivity; however, it was not shown that usable direct television signals exist in such fringe areas.

7. The testimony of Mr. Livingston and of the Commission's engineering witnesses shows that other nearby communities in the Columbia River Valley have booster station installations similar in effect to the Bridgeport operation. None of those booster television signals are provided by an authorized service as we have used the term hereinabove, because boosters are not licensed stations. Theoretical and actual interference can and does occur between and among the signals of these booster stations. The Commission's engineers found that Booster stations were operating in the nearby communities of Bridgeport Bar and Brewster, as well as in Bridgeport. In the fringe and overlap areas of these three stations the engineers observed two and sometimes three displaced images on the automobile mounted portable receiver which the Commission then provided.4/ The mobile receiver

3/ The observations at the Crabtree residence were made on the initiative of the Commission's engineer because he believed it to be in a location where both direct and booster station signals might be receivable.

4/ At the time the Commission's engineers made their observations and measurements, from October of 1954 to May of 1955, they were not provided with mobile television monitoring equipment such as has been recently put in operation. See Public Notice 24254 dated October 4, 1955.

employed in these observations was coupled with an elevated Yagi type directional antenna which could be so rotated as to determine the directions of incoming signals and to observe the effects of the multiple booster stations' signals. At one point in these cruising observations it was noted that the ghost image phenomenon could not be sufficiently tuned out to receive a stable picture, but it does not appear that any residence is near this point. On the other hand, the evidence suggests that in all residential areas affected by the booster station there is now a first or a better television service than existed previously. Other testimony was offered concerning possible interference with point to point communication service as authorized in the frequency ranges between Channel 4 and Channel 6, as well as upon the possibilities of injurious regenerated or self-oscillating radiations; however, the evidence upon these subjects is not convincing that real or noticeable interference threats are posed by the Bridgeport booster operation.

8. Two Commission engineers, Robert C. Dietsch and Herbert H. Arlowe, testified about various inspections, measurements, and observations which they made upon booster station operation in the Bridgeport area at various dates between October 12, 1954 and May 11, 1955. Each of these Commission witnesses is a qualified radio engineer. Their evidence, including testimony, photographs and maps, provided information upon the nature of the installations and their various operating characteristics herein described. The Bridgeport equipment consists practically of two separate but adjacent installations, one for Channel 4 and the other for Channel 6. The Channel 4 installation is first described and certain variations in the Channel 6 installation are then noted. The booster station is located on Dyer Mountain which is about 1,400 feet higher than, and about four miles north and west of, the town of Bridgeport. The Channel 4 installation consists essentially of:

a. A directionalized single unit 10-element receiving antenna so located and oriented as to receive the television broadcast signal directly from Station KXLY-TV;

b. A Jerrold 40-3-A-4 co-channel radio frequency amplifier, electrically powered by 110 volts A.C. located on the receiving antenna mast;

c. Cables for conducting the received and amplified signal to the transmitter antenna;

d. Another amplifier, as described in "b" above, which is located on the mast of the transmitter antenna; and

e. A directionalized antenna so coupled and located and oriented as to direct the amplified signal towards Bridgeport.

9. The Channel 6 booster installation is essentially the same as above described except that it employs four "stacked" receiving antenna units, is located at a higher elevation, and includes three Jerrold 40-3-A-6 amplifiers. This more elaborate installation was made in order to gather and utilize the Channel 6 signal which is weaker than that on Channel 4. The two transmitting antennas are located about 100 feet from each other and are somewhat below the receiving antennas. The elements of the receiving and transmitting antennas for each channel are essentially identical, except as to dimensions (and the number employed on Channel 6), and they are described as 10-element Yagi antennas which operate either to receive or to transmit with directional and signal gain characteristics. The small amplifiers are continuously supplied with power to their vacuum tubes so as to operate at all times. The systems thus continuously retransmit the received signals without an attending operator or other control devices. The amplifier circuit, although not fully described, was said to include an automatic gain control feature which might tend to cause the unit to oscillate and thus to emit carrier signals even when the activating broadcast signal is not present. It is one engineer's opinion that self-oscillating radiations could occur for other reasons such as misadjusted or deteriorated components; he made measurements behind the booster transmitting antenna when the principal station was not broadcasting which indicated that the booster installation was then transmitting a pure carrier wave which was not precisely on the Channel 4 frequency.

10. The Commission's engineers, based on their knowledge and study of co-channel amplifier units, estimated the output power of the Bridgeport booster to be about 1/100 of one watt; one engineer declined to evaluate the gain effects of the transmitter antenna and stated his opinion that the output would amount to less than one watt. The directional pattern of radiation is cone-shaped and the 15 uv/m signal strength contour pattern was estimated, on the basis of various measurements and observations, to extend outward from eight to ten miles and to be about five miles across it at its widest point. The Commission's Rules and Standards do not state a minimum field strength for television broadcast service signals, and an engineering witness expressed the opinion that a 15 uv/m signal would give a usable picture, but not a good usable picture, on a television screen if the installation included a good antenna system which was specified to be two stacked antennas at the top of a 70-foot mast; below 15 uv/m, "you would get nothing." Another opinion was that a signal for acceptable viewing ought to have the minimum value specified in the Commission's Rules and Standards for the Grade B signal strength contour, i.e., about 225 uv/m on the channels involved here.

11. The Bridgeport booster signals were observed on the Commission's portable receiver and were measured with a field intensity meter on numerous occasions and at various points in and around Bridgeport. The measurements were not intended to, and did not, establish accurately the signal strength contours but were evaluated by the engineers to support their opinions as to the location of the 15 uv/m contour above-mentioned. It is unnecessary here to detail the times and circumstances and values of the various observations related in the evidence; it is deemed sufficient to state that: the booster signal strength ranges in the Bridgeport vicinity from 246 uv/m near the center of town down to zero values as the distances or outward angles are increased; immediately below and in front of the booster transmitting antennas the signal strengths were 6,100 uv/m on Channel 4 and 520 uv/m on Channel 6. Various measurements of the separate video and audio signals on both Channesl 4 and 6 were made and related in the evidence, but the purposes of this decision are adequately served by the foregoing generally inclusive findings. Upon disconnecting the Channel 4 booster it was found that the direct signal from Spokane had a value there of 150 uv/m. The various readings establish that the signal intensities diminished in values when made at greater distances and at points angling away from the direction in which the transmitting array was oriented. It was clearly proved, by the foregoing and by disconnect tests, that the television signals observed and measured in Bridgeport emanated from the booster station operated by the respondent.

12. The investigations made by the Commission's engineers as herein related were not made on account of complaints; it was testified that no complaints about interference or other adverse effects of the Bridgeport booster station had been made at any time to the Commission or to its field offices. Rather than complaints, the Commission has received some communications commending the service rendered by this and other booster stations; the evidence includes supporting letters from the Manager of the Douglas County Public Utility District, the Chamber of Commerce at Bridgeport, Brewster, and Coulee City, the Winthrop Kiwanis Club, the Upper Methow Valley Television Corporation, and the Superintendent of Public Schools in Bridgeport. These correspondents protested the taking of action that would require discontinuance of booster station operations, requested that provisions be made for the licensing thereof, and variously claimed for booster stations these benefits: their services supply and augment entertainment and educational facilities and activities which are meager in these isolated areas; the availability of television service is an inducement in the employing of school teachers who, being accustomed to television service, sometimes declined to locate where it is unavailable; other professional people and prospective employees are more disposed to locate in an area where television programs are available; the service is an important means for providing news and information in these areas where communications media are less available than in larger communities; and the television service provided brings those communities closer to the main streams of national life, aids the economy of the region, is well suited to provide service to these communities so as to afford the greatest good for the greatest number of persons, and does not cause interference to or adverse effects upon any other radio communications or broadcast services.

13. The records of the Commission indicate that Station KXLY-TV is operated on Channel 4 in Spokane with its transmitter located on top of Mt.Spokane, with authorized power of 48 kw visual and 26.9 kw aural, and that it is affiliated with the Columbia Broadcasting System and the DuMont television networks. Station KHQ-TV is operated on Channel 6 at Spokane with authorized power of 100 kw visual and 50 kw aural, with its antenna 3,143 feet above sea level, and it is affiliated with the National Broadcasting Company and the American Broadcasting Company television networks. It is found also that Stations KXLY-TV and KHQ-TV broadcast network television programs which, although their signals travel entirely in the State of

Washington between Spokane and Bridgeport and between Spokane and Dyer Mountain, are originated outside the State of Washington and are transmitted by common carrier lines or microwave relays across state lines to Spokane for broadcast purposes. It is common knowledge, of which we are bound to take notice, that the programs of these stations include: film that move by mail and otherwise in commerce among the states; news reports and special events nationally and internationally gathered and distributed ; and commercial messages designed to affect the sale and distribution of products that move in interstate commerce. The Bridgeport booster station signal does not detectably extend beyond the borders of the State of Washington. The radiated power is so low that no hazards of reflected sky-wave interference exist. It was stipulated and agreed by statements made on the record that no person who has adjusted, installed or otherwise operated the Bridgeport booster holds a radio operator license issued by the Commission authorizing the operation of a television transmitting station; similarly, it was agreed that express authority for rebroadcasting the KXLY-TV and KHQ-TV programs has not been received by the respondent from the licensees of those stations, and further, that representatives of those licensees have informed the respondent that they would have no objection to authorizing such rebroadcasts when and if the booster station should be licensed or otherwise sanctioned by the Commission.5/ Application has not been made for, and the Commission has not issued, a construction permit or license for the Bridgeport booster station; the Rules and Standards do not now provide for the licensed operation of such an installation.

Conclusions

14. The Commission's order of March 30, 1955, on the premises stated in the first paragraph of this Initial Decision, directed, pursuant to Section 312(c) of the Communications Act,6/ that a hearing be held in order to determine

5/ The above stipulations reserved for the respondent its contention that rebroadcast permission is not required, and reserved for Commission counsel his contention that the licensees' willingness to grant permission is not material. It is reasonable to believe that the licensees' attitude towards booster station operation might be similar to their views towards community antenna television (CATV), described by Commissioner John C. Doerfer in an address before the National Association of Railroad and Utilities Commissioners on November 10, 1954 as follows: "Most broadcast stations do not object. CATV extends their coverage area and thus creates a stronger inducement for the advertisers' support."

6/ The pertinent provisions of Section 312 of the Act are:

> "(b) Where any person...(2) has violated or failed to observe any of the provisions of this Act, or (3) has violated or failed to observe any rule or regulation of the Commission authorized by this Act...., the Commission may order such person to cease and desist from such action.
>
> "(c) Before....issuing a cease and desist order pursuant to subsection (b), the Commission shall serve upon the...person involved an order to show cause why...a cease and desist order should not be issued. Any such order to show cause shall contain a statement of the matters with respect to which the Commission is inquiring and shall call upon the matter specified therein;...If after hearing, or a waiver thereof, the Commission determines that....a cease and desist order should issue, it shall issue such order, which shall include a statement of the findings of the Commission and the grounds and reasons therefor and specify the effective date of the order, and shall cause the same to be served on said....person.
>
> "(d) In any case where a hearing is conducted pursuant to the provisions of this section, both the burden of proceeding with the introduction of evidence and the burden of proof shall be upon the Commission."

whether a cease and desist order should be issued to compel suspension of the television booster station operations described in the Findings of Fact. Thus, the ultimate question is: should a cease and detest order be issued on the basis of the evidence in this hearing record and in the light of the arguments presented in the pleadings filed by the parties? Careful examination of the entire evidence and the briefs and cited authorities has lead to the conclusion that extensive discussion of disputed constitutional and statutory questions as to the Commission's licensing and regulatory powers would needlessly encumber the decision required to be made in this case. It is unnecessary in this case to reach the substantial legal questions because they are rendered moot by the clearly indicated negative answer to the ultimate question; that answer is derived from the factual circumstances which are here controlling regardless of the conclusions that might follow an exhaustive analysis of the legal points urged on matters other than those covered by Section 312 of the Communications Act. Nevertheless, the following paragraph is included to indicate the nature of the legal questions that were urged but are not decided here.

15. Commission counsel's learned brief cites the language of Section 301 of the Communications Act and its legislative history7/ as well as numerous Court opinions,8/ in urging the conclusion that, "All communications by radio are either in interstate commerce or affect it, so as to subject them to the regulatory authority of the Federal Communications Commission." The circle is not thus squared9/

7/ Hearings on S. 1754, 69th Congress, 1st Sess., pages 101-102; Hearings on H.R. 5589, 69th Congress, 1st Sess., pages 10-11; 19-21; Senate Report 772, 69th Congress, 1st Sess., to accompany H.R. 9971

8/ Whitehurst v Grimes et al., 21 F. (2d) 787 (1927); City of New York v Federal Radio Commission, 36 F. (2d) 115 (1929); KVL, Inc. v. Tax Commission of Washington et al., 12 F. Supp. 497 (1935); Technical Radio Laboratory v Federal Radio Commission, 36 F. (2d) 111, 113 (1929); Baker v. United States, 93F. (2d) 332 (1937); WBT v. Poulnot, 46 F. (2d) 671 (1931); Federal Radio Commission v Nelson Brothers Bond & Mortgage Co., 289 U.S. 266, 279 (1933); United States v. Betteridge et al., 43 F. Supp. 53, 55 (1942); Allen B. Dumont Laboratories, Inc., et al, v. Carroll, 184 F. (2d) 153-155 (1950); Lorain Journal v. United States, 342 U.S. 143 (1951); Houston, East and West Texas Railway Co. v. United States, 234 U.S. 342 (1914); United States v. Wrightwood Dairy Co., 315 U.S. 110, 119-121 (1942); Moore v. Mead's Fine Bread Co., 348 U.S. 115 (1954); United States v. Employing Plasterers Association of Chicago et al., 347 U.S. 186 (1954); United States v. Shubert et al., 348 U.S. 222 (1955); and United States v. International Boxing Club of New York, 348 U.S. 236 (1955).

9/ In Kirschbaum v Walling, 316 U.S. 517, 522 (1942), Mr. Justic Frankfurter described a comparable legal problem thus:

> "To search for a dependable touchstone by which to determine whether employees are 'engaged in commerce or in the production of goods for commerce' is as rewarding as an attempt to square the circle. The judicial task in marking out the extent to which Congress has exercised its constitutional power over commerce is not that of devising an abstract formula. Perhaps in no domain of public law are general propositions less helpful and indeed more mischievous..."

The question is extensively discussed in "The Scope of the Phrase Interstate Commerce" by Robert L. Stern, 41 A.B.A.J. 823 (September 1955.)

Such a conclusion is not necessary here, nor was it in many cited opinions upon cases which involved radio broadcasting operations that were clearly within both the language of the statute and the constitutional realm of commerce among the states. Unlike those cases, this proceeding does not involve the taxing or licensing or censorship powers of a State as against the Federal regulatory powers; neither does it involve the protection of the business of radio broadcasting under the laws governing monopolies; unfair trade practices, fair labor standards, or labor relations. Instead, the facts here disclose the operation of an unlicensed fixed low-power television signal booster installation near the center of the State of Washington which radiates an amplified broadcast signal but does not transmit detectable energy or communications beyond the borders of that State. It is not here necessary to express an opinion that the courts and the congressional spokesmen and witnesses did or did not contemplate Commission regulation of an operation such as this Washington booster station, absent burdensome or substantial interference to interstate or foreign radio communications.10/

16. The ultimate question is whether the Commission should order cessation of the booster station operation, and the question arises under Section 312 of the Communications Act which, "gives to the Commission complete discretion in the exercise of the powers granted thereunder." In re Petersburg Television Corporation (WXEX-TV), FCC 55-948, 12 RR 1395 (September 21, 1955). If it should appear that the booster operation ought to be restrained then the questions of statutory and constitutional authority of the Commission would need to be examined; conversely, those legal questions need not be expounded if the circumstances here presented do not warrant the assertion and exercise of regulatory authority. Regulation for the sake of regulation alone is not the Commission's objective, nor is it the intent of the Act or the purpose of the cease and desist procedures allowed in Section 312.11/

10/ The question was forecast in 1926 by a principal witness at the legislative hearings thus:

> "Of course it is possible to conceive of a station so located within a large State and using so low power as not to come within the terms of this clause (Section 301); but such stations would be extremely rare..." (Hearings on H.R. 5589, footnote 7, supra, pages 19-20).

And in 1931, the question was reserved in Judge Parker's opinion in WBT v. Poulnot, footnote 8, supra, by stating:

> "The plaintiff contends that all radio communication is necessarily interstate, and in the present state of the art, this appears to be correct. However, it is not inconceivable that radio communication may in the future be so perfected that it may be confined strictly intrastate; but we do not consider it necessary to make any ruling upon that point now. Certainly under the facts of the present case, the plaintiff, through its broadcasting plant, is engaged in interstate commerce."

11/ This proceeding does not involve the regulation of rates of community antenna television (CATV) systems, but the effects of a cease and desist order against the television booster station here involved would have no less impact on the operators and those served than the CATV situation discussed by Commissioner John C. Doerfer in his address before the National Association of Railroad and Utilities Commissioners at Chicago on November 10, 1954, when he said:

> "It is difficult to see what national purpose would be served by the Federal Government regulating local rates and charges of CATV systems whose sole contact with interstate commerce is to take a weak or a nearly dissipated signal and regenerate it for local use. Nor can their activities be deemed a burden upon interstate commerce. They impose a charge for that which a broadcaster gives free if the subscriber has an antenna and receiving set powerful enough to capture it in its weakened phases."

17. It is emphasized that what is under consideration here is the booster station operation as described in the evidence; factually different situations may arise, but speculations and theories about the harmfulness of other unlicensed operations provide no basis for assessing such hypothetical consequences against this booster station operation. These are the significant facts in this case: the unlicensed booster station picks up and amplifies and rebroadcasts on the same channel with low power Spokane television station signals. Television program service is thus provided to many residents of the area who could not otherwise receive those programs with normal receiver installations; and to many a new and otherwise wholly unobtainable reception is afforded. The public interest is thus served unless countervailing effects are found to flow from the operation.

18. Other authorized radio communications services must be protected against interference, but this mandate of the Act does not require the Commission to apply the strictest technical meaning to the word "interference" as it is used in the Act.12/ On the contrary, the Act's mandates for consideration of the public interest and convenience are at least equally binding upon the Commission's regulatory determinations.13/ Proceeding from these premises, it has been found that the booster station can cause co-channel interference in some areas to direct television reception from the originating station, an authorized service. It has also been found that where such interference to home reception could be observed equal or superior reception14/ of the same program service is available by antenna adjustment to receive the booster station signals. Manifestly this degree of interference to television reception does not warrant an order to discontinue the operation that in fact augments television service to substantial numbers of persons. To hold otherwise would aid service to none and would leave many of the area's residents with discouragingly blank and quiet and ineffective television receivers.

12/ Webster's International Dictionary, Second Edition, defines "interference" thus: "7. Physics. The mutual effect, on meeting, of two beams of light or of two series of pulsations of sound or, generally, of two waves or vibrations of any kind....9. Radio. a Confusion of received signals due to strays, undesired signals, etc. b That which produces such confusion." The same authority also defined the word "interfere" as used in physics to mean, "to act reciprocally, so as to augment, diminish, or otherwise affect one another."

13/ A policy committed to the Commission is thus stated in Section 1 of the Communications Act:

> "For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States a rapid, efficient,...wire and radio communication service..."

An express purpose of the Act, Section 301, is "to maintain the control of the United States over all the channels of interstate and foreign radio transmission;". Section 303 of the Act enumerates various powers which the Commission shall exercise, e.g., to classify radio stations, to make regulations to prevent interference between stations, to study new uses for radio, and "generally encourage the larger and more effective use of radio in the public interest."

14/ The Commission's Rules and Standards do not specify the signal intensity required for acceptable or usable television program reception. This decision employs the descriptive terminology variously used by the witnesses and counsel to characterize the quality, a subjective judgment, of television reception that exists in the area.

19. The booster station operation does not impede or threaten to impede the exercise by the Commission of its allocation responsibilities under the Communications Act. This operation is not in derogation of the Commission's right and duty to maintain control of the channels of foreign and interstate radio communication, because the channels received and rebroadcast by the booster station are as fully and effectively employed by existing stations as the present standards of allocation will permit. The 190-mile separation requirement for licensed television broadcast stations precludes location of a co-channel station closer than Spokane. If the Commission should determine at some future time to allocate the affected channels inconsistently with the use to which they are now being put by the booster station, the law will as effectively then as now permit ouster of the booster from its occupancy thereof. The fact that the booster station has chosen to squat, as counsel's brief suggests, vests no pre-emptive or continuing right of use or ownership, and this decision adds no weight to any contrary claims that might be asserted. It is only decided here that whatever trespass in law may have occurred has not been shown to cause or threaten effects more evil than good upon Federal control and effective use of the television channels here utilized. Counsel for the Commission suggested that to permit continued unlicensed booster operation because it happens to cause no interference would be comparable to allowing automobiles unlimited highway speeds provided they don't cause accidents; the hazards are not similar, although this situation does involve an unregulated traveler of the "ether lanes" where most others are licensed and controlled. In both highway and electronic airway traffic the cognizant authorities have rules for licensing and controlling the high-powered vehicles employed, but it does not follow in either situation that an unlicensed baby buggy or a low-powered booster station must be denied a little room to perform its useful chore. It does not appear from this record that traffic safety or traffic control is threatened by the respondents' airing of their baby in the small and untraveled niche occupied by the booster station.

20. It is clear that the booster station emits radio frequency energy far in excess of that permitted for unlicensed or uncertified devices under Part 15 of the Commission's Rules. However, it is obvious that the present Rules do not compel the immediate discontinuance of this operation, because Part 15 is undergoing a realistic reappraisal by the Commission in Docket No. 9288. On April 14, 1954, the Commission in that proceeding issued a Notice of Further Proposed Rule Making, (FCC 54-502, Pike and Fischer Radio Regulation, Volume 1, Part 2, page 65:i et. seq.) which would define restricted radiation devices15/ and harmful interference 16/ and would provide, in Sections 15.201-15.207,

15/ The proposed Section 15.2(b) defines Restricted Radiation Devices as:

> "Devices which radiate radio frequency energy and are specifically designed to generate radio frequency energy (whether or not they are intended to be used for communications purposes) and which are not specifically covered in any other part of the Commission's Rules and Regulations."

16/ The proposed Section 15.2(d) defines Harmful Interference as:

> "Any radiation or any induction which endangers the functioning of a radio navigation service or of a safety service or obstructs or repeatedly interrupts a radio service operating in accordance with the table of frequency allocations contained in Part 2 of the Commission's Rules whether or not such interference occurs within the normally recognized field intensity contours of the authorized station."

for the licensing of restricted radiation devices under specified circumstances.17/ It was correctly pointed out by Commission counsel that this is not a rule making proceeding, such as in Docket No. 9288, and that the booster station cannot by a decision in this case be declared a lawful operation under the proposed rules. Certainly it is neither the intent nor the effect of the judgment in this case to confer upon the respondent, or to forecast, any right or privilege which it might acquire upon proper application if the rules proposed in Docket No. 9288 were to be adopted. As above stated, it is here decided only that the Rules in Part 15 do not require that a cease and desist order be issued in this case. Whether such a booster station operation may be licensed is a question not presented now; the question here is, has it been proved that it should be abated now? The answer emerges that the proof is insufficient to show that the public interest would be served by abatement, and accordingly a cease and desist order should not be issued.

21. In summary, it is concluded that the television booster station does not cause objectionable or harmful interference to any existing or authorized radio broadcast or communications transmission or reception. This new use of radio, in practice, affords a larger and more effective use of television broadcast channels so that many families in the area are provided with a better, dependable, and more economical television program service. The consequences of issuing a cease and desist order would be to take away from those who receive the booster station's signals the television service they now enjoy. In this remotely situated and mountain-isolated community a public importance attaches to the people's being informed and entertained through the television medium; of course, there exists no vested right in either those who receive or those who transmit, to a continuation of the operation; the contrary is here declared. But, the utilization of radio channels and the Commission's essential controls thereof are not impaired or threatened by the television booster station hereinabove discussed, and no other substantial reasons support a conclusion that the public interest, convenience, and necessity would be served by issuing the proposed cease and desist order.

17/ The proposed Section 15.202 is as follows:

"Showing required:

"An Authorization for the operation of a restricted radiation device may be granted upon proper application therefor in accordance with the provisions of this part and a showing that in the light of the following considerations the public interest, convenience, and necessity would be served by such a grant:

"(a) The purpose for which the equipment sought to be licensed will be used.

"(b) The reasons why the equipment involved cannot be operated in compliance with the provisions of this Part for unlicensed operation.

"(c) The nature and extent of interference that may be caused to authorized radio services by the operation of such equipment.

"(d) The procedures that will be followed to eliminate promptly any actual interference to authorized radio services."

22. The facts and circumstances presented in this proceeding lead to the final conclusion that the respondent did appear at the hearing as directed and it did show cause why the cease and desist order should not be issued as proposed in the Commission's order dated March 30, 1955. The weight of the evidence received and considered is not sufficient to warrant the exercise here of the proscriptive sanction authorized in Section 312 of the Communications Act. ACCORDINGLY,

IT IS ORDERED this 18th day of October, 1955, that the cease and desist order in this proceeding BE NOT ISSUED, and this proceeding IS HENCE DISMISSED.

/s/J. D. Bond
Hearing Examiner
Federal Communications Commission

Released: October 19, 1955

EXHIBIT B

FCC 56-157
28765

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington 25, D. C.

In the Matter of	)	
	)	
Cease and Desist Order	)	DOCKET NO. 11332
to be directed against	)	
C. J. COMMUNITY SERVICES, INC.	)	
Bridgeport, Washington	)	

Appearances

Mr. Richard A. Solomon and Mr. John H. McAllister of Washington, D.C. on behalf of the Federal Communications Commission; the respondent was not represented by legal counsel. 1/

DECISION

By the Commission:

Preliminary Statement

1. By order dated March 30, 1955 (released April 1), the Commission directed, "pursuant to Section 312(c) of the Communications Act of 1934, as amended," that the above-named respondent show cause why an order should not be issued commanding it and its officers or agents to cease and desist from the television booster station2/ activities hereinafter described.

1/ The respondent corporation's president, James E. Livingston, who is not an attorney, participated in the hearing on behalf of the respondent through an opening statement, cross-examination, and discussions of various objections to evidence; he also testified and presented some documentary evidence. Representative participation was permitted because counsel for the Commission expressly waived any question that might otherwise surround Mr. Livingston's so conducting the case; counsel's argument that Section 1.711 of the Commission's Rules authorizes such corporate representation was explicitly not sustained. (cf. Section 6(a) of the Administrative Procedure Act.)

2/ A television booster station is not defined in the Commission's Rules or Standards; the Bridgeport booster station was extensively described and pictured (by six photographic exhibits) in the evidence. Basically this operation consists of mountain-top installations of receiving and transmitting antennas, with intermediate separately powered co-channel amplifiers, which receive and amplify and redirect into Bridgeport the television signals of two Spokane stations. This operation is actually two supplemental stations as described by Commissioner Rosel H. Hyde on April 25, 1951:

> "We have not established a definition for booster stations, but the booster-station idea as presented to us by the industry contemplates a subsidiary station, a supplemental station, if you please, which would pick up the program of the basic station and rebroadcast it at some point not reached by the central station. . ." (Hearings before the Committee on Interstate and Foreign Commerce, House of Representatives, 82nd Congress, 1st Session, on S. 658, page 238.)

The Order was based on the stated premises that: (1) the respondent is operating a television broadcast station on Channels 4 and 6 at Bridgeport, Washington without a license "as required by Section 301 of the Communications Act"; (2) the operation violates Section 318 of the Act in that it is not being carried on by a licensed operator; (3) the station is rebroadcasting programs of two named television stations in Spokane without the express authority of those stations and the respondent is thus violating Section 325(a) of the Act; and (4) the respondent has been notified in writing of the unlawful nature of its operation and afforded an opportunity to comply with lawful requirements but has failed to do so. The Commission's order directed that a hearing be held on May 16, 1955, and by subsequent orders the place of hearing was specified as the North Courtroom in the Chelan County Courthouse in Wenatchee, Washington. A hearing was held at the place specified on May 16 and 17, 1955, in which hearing the parties participated as indicated in the statement of appearances and in footnote 1.

2. Proposed findings of fact and conclusions of law were not required to be filed; time for the permissive filing of such pleadings was extended beyond the 20-day period allowed by the Commission's Rules. Counsel for the Commission timely filed proposed findings of fact and conclusions of law, with briefs and appendices in support thereof, and they have been considered. No pleadings were filed on behalf of the respondent after the hearing record was closed on May 17, 1955. On October 19, 1955, Hearing Examiner Bond released his Initial Decision proposing that a cease and desist order not be issued and that the proceeding be dismissed. Exceptions and a brief in support thereof were filed by Commission Counsel, respondent filed a reply thereto, and oral argument before the Commission en banc was heard on December 19, 1955, this argument being consolidated with those in two similar cases (Dockets Nos. 11357 and 11337) which cases are not here under consideration. We have considered all of the exceptions. Those that have been granted, either in whole or in part, are reflected in this opinion; the others, or the portions not so granted, are denied either as contrary to the record, or as adequately reflected by the decision, or as having no decisional significance here.

Findings of Fact

3. Some facts about the location and characteristics of the community of Bridgeport are pertinent to the ultimate questions to be decided. The 1950 Census Reports (not in evidence) indicate that the town of Bridgeport has 802 inhabitants. The town is located in Douglas County in the valley of the Columbia River near Chief Joseph Dam; is about 110 miles west of Spokane, is about 90 miles south of the Canadian border, and lies at greater distances from the other borders of the State of Washington. Bridgeport is surrounded, except for the winding Columbia River gorge, by rugged high plateau terrain which generally is 1,000 feet or more above the elevation of the town. Its location and topography are such that it is not within the Grade A or Grade B service contour of any existing television broadcast station; an engineer for the Commission stated his opinion that Bridgeport residents would not be able to receive an acceptable television broadcast signal from any station authorized under the Commission's allocation plan, with the possible exception that signals from a favorably located transmitter at Omak-Okanogan (where unapplied for UHF Channel *35 has been allocated for use in noncommercial educational television broadcasting) might be received over the 29-mile path to Bridgeport. The evidence establishes that no usable or measurable direct television broadcast signal is present in Bridgeport, and that television broadcast service is there provided by the booster station operation herein considered.

4. In January of 1954, the president of the respondent corporation--which was not then in existence--directed an inquiry to the Commission's field office in Seattle concerning the licensing of a television booster installation for use at Bridgeport. Mr. Livingston was correctly advised by the Commission's reply that a co-channel amplifier or booster station as contemplated, and as subsequently installed and operated, could not be licensed under the existing Rules and Regulations. However, a Mr. Powell, who appears to be a consultant to and an "honorary" member of the respondent corporation and who engages to some extent in radio and television servicing, proceeded in early 1954 to install a battery-powered booster station for receiving and directing amplified

Channel 4 television signals into Bridgeport; subsequently a permanent installation with commercial electric power was constructed in the summer of 1954. The booster station is located on a high hill northwest of Bridgeport so that its received signal passes generally over the town before being sent back and down into town by the array. Mr. Powell was notified by the Commission that the operation was deemed to be unlawful, and thereupon the respondent corporation was organized on a nonprofit basis and, "in order to relieve Mr. Powell of further liability in the matter," it has continued to operate and enlarge the booster installation so as to provide reception in Bridgeport of television programs from Spokane Stations KXLY-TV (Channel 4) and KHQ-TV (Channel 6). Under date of November 3, 1954, a letter was written by the Commission to respondent in compliance with the provisions of Section 312(c) of the Communications Act of 1934, as amended, and Section 9(b) of the Administrative Procedure Act, to afford respondent opportunity to demonstrate or achieve compliance with the requirements of the law as set forth in said letter. Operation of the boosters continued thereafter as is indicated, infra.

5. The legal existence, organization, and governing bylaws of the respondent corporation were not formally shown in evidence, but its creation and functioning were described by Mr. Livingston. The corporation has an elected board of twelve directors, who were named, three of whom occupy the offices of president, vice-president, and secretary-treasurer. Policies of the corporation generally are made by the membership at large, and eligibility for membership extends to all residents in the Bridgeport area, depending upon "whether they are able or not to obtain TV reception by the amplifying transmitter operated by this corporation." Mr. Livingston testified that the corporation membership authorized him to represent the respondent in the hearing and that a number but not all of the corporate directors attended the hearing. The respondent appears to be a nonprofit corporation having about 80 members who pay an annual fee of $5.00; capital contributions, if any, were not stated or inquired about. The corporation pays $3.00 a month to the Public Utility District for the electric power service provided to the booster station. The respondent paid Mr. Powell $1.00 for the Channel 4 booster installation, which probably had cost about $500, and in the fall of 1954 an additional subscription of $1,000 was raised by the corporation and about $950 of that sum was expended for the installation of the more elaborate Channel 6 booster which is hereinafter described.

6. The Bridgeport booster station operation does not cause objectionable interference or any interference to direct television signal reception in Bridgeport because satisfactory direct reception is not there possible. Observable interference, evidenced by a displaced image, was made apparent by the Commission's engineers upon the home receiver of a Mr. Crabtree who then lived at an elevation higher than Bridgeport; his residence location was such that he received a good signal from the booster station and he could also receive the Spokane Channel 4 signal as it was apparently reflected from a mountain peak about 50 miles away and in a direction substantially different from either Spokane or the Bridgeport booster.3/ The interference phenomenon there was experimentally developed by rotating Mr. Crabtree's directional receiving antenna between the directions of the booster and that reflected signal from Spokane; the displaced image or "ghost" was not present on Mr. Crabtree's receiver when the antenna was oriented towards either the mountain peak or the Bridgeport booster. The Bridgeport booster operation does not cause electrical interference with any other existing radio or television broadcast service authorized under the Commission's Rules and Standards, although the engineers stated that there exist areas on the fringe of the booster radiation pattern where co-channel interference could not be tuned out by antenna adjustment or receiver selectivity; however, it was not shown that usable direct television signals exist in such fringe areas.

3/ The observations at the Crabtree residence were made on the initiative of the Commission's engineer because he believed it to be in a location where both direct and booster station signals might be receivable.

7. The testimony of Mr. Livingston and of the Commission's engineering witnesses shows that other nearby communities in the Columbia River Valley have booster station installations similar in effect to the Bridgeport operation. None of these booster television signals are provided by an authorized service as we have used the term hereinabove, because boosters are not licensed stations. Theoretical and actual interference can and does occur between and among the signals of these booster stations. The Commission's engineers found that booster stations were operating in the nearby communities of Bridgeport Bar and Brewster, as well as in Bridgeport. In the fringe and overlap areas of these three stations the engineers observed two and sometimes three displaced images on an automobile mounted portable receiver. The mobile receiver employed in these observations was coupled with an elevated Yagi type directional antenna which could be so rotated as to determine the directions of incoming signals and to observe the effects of the multiple booster stations' signals. At one point in these cruising observations it was noted that the ghost image phenomenon could not be sufficiently tuned out to receive a stable picture, but it does not appear that any residence is near this point. On the other hand, the evidence suggests that in all residential areas affected by the booster station there is now a first television service or a better television service than existed previously. Other testimony was offered showing the possibility of interference with point to point communication service as authorized in the frequency ranges between Channel 4 and Channel 6 as well as the possibilities of injurious regenerated or self-oscillating radiations.

8. Two Commission engineers, Robert C. Dietsch and Herbert H. Arlowe, testified about various inspections, measurements, and observations which they made upon booster station operation in the Bridgeport area at various dates between October 12, 1954 and May 11, 1955. Each of these Commission witnesses is a qualified radio engineer. Their evidence, including testimony, photographs and maps, provided information upon the nature of the installations and their various operating characteristics herein described. The Bridgeport equipment consists practically of two separate but adjacent installations, one for Channel 4 and the other for Channel 6. The Channel 4 installation is first described and certain variations in the Channel 6 installation are then noted. The booster station is located on Dyer Mountain which is about 1,400 feet higher than, and about four miles north and west of, the town of Bridgeport. The Channel 4 installation consists essentially of:

a. A directionalized single unit 10-element receiving antenna so located and oriented as to receive the television broadcast signal directly from Station KXLY-TV;

b. A Jerrold 40-3-A-4 co-channel radio frequency amplifier, electrically powered by 110 volts A.C. located on the receiving antenna mast;

c. Cables for conducting the received and amplified signal to the transmitter antenna;

d. Another amplifier, as described in "b" above, which is located on the mast of the transmitter antenna; and

e. A directionalized antenna so coupled and located and oriented as to direct the amplified signal towards Bridgeport.

9. The Channel 6 booster installation is essentially the same as above described except that it employs four "stacked" receiving antenna units, is located at a higher elevation, and includes three Jerrold 40-3-A-6 amplifiers. This more elaborate installation was made in order to gather and utilize the Channel 6 signal which is weaker than that on Channel 4. The two transmitting antennas are located about 100 feet from each other and are somewhat below the receiving antennas. The elements of the receiving and transmitting antennas

for each channel are essentially identical, except as to dimensions (and the number employed on Channel 6), and they are described as 10-element Yagi antennas which operate either to receive or to transmit with directional and signal gain characteristics. The small amplifiers are continuously supplied with power to their vacuum tubes so as to operate at all times. The systems thus continuously retransmit the received signals without an attending operator or other control devices. The amplifier circuit, although not fully described, was said to include an automatic gain control feature which might tend to cause the unit to oscillate and thus to emit carrier signals even when the activating broadcast signal is not present. It is one engineer's opinion that self-oscillating radiations could occur for other reasons such as misadjusted or deteriorated components; he made measurements behind the booster transmitting antenna when the principal station was not broadcasting which indicated that the booster installation was then transmitting a pure carrier wave which was not precisely on the Channel 4 frequency.

10. One of the Commission's engineers, based on his knowledge and study of co-channel amplifier units, estimated the output power of the Bridgeport booster including antenna gain would amount to less than one watt. The directional pattern of radiation is cone-shaped and the 15 uv/m signal strength contour pattern was estimated, on the basis of various measurements and observations, to extend outward from eight to ten miles and to be about five miles across it at its widest point. The Commission's Rules and Standards do not state a minimum field strength for television broadcast service signals, and an engineering witness expressed the opinion that a 15 uv/m signal would give a usable picture, but not a good usable picture, on a television screen if the installation included a good antenna system which was specified to be two stacked antennas at the top of a 70-foot mast; below 15 uv/m, "you would get nothing." Another opinion was that a signal for acceptable viewing ought to have the minimum value specified in the Commission's Rules and Standards for the Grade B signal strength contour, i.e., about 225 uv/m on the channels involved here.

11. The Bridgeport booster signals were observed on the Commission's portable receiver and were measured with a field intensity meter on numerous occasions and at various points in and around Bridgeport. The measurements were not intended to, and did not, establish accurately the signal strength contours but were evaluated by the engineers to support their opinions as to the location of the 15 uv/m contour above-mentioned. It is unnecessary here to detail the times and circumstances and values of the various observations related in the evidence; it is deemed sufficient to state that: the booster signal strength ranges in the Bridgeport vicinity from 246 uv/m near the center of town down to zero values as the distances or outward angles are increased; immediately below and in front of the booster transmitting antennas the signal strengths were 6,100 uv/m on Channel 4 and 520 uv/m on Channel 6. Various measurements of the separate video and audio signals on both Channels 4 and 6 were made and related in the evidence, but the purposes of this decision are adequately served by the foregoing generally inclusive findings. Upon disconnecting the Channel 4 booster it was found that the direct signal from Spokane had a value there of 150 uv/m. The various readings establish that the signal intensities diminished in values when made at greater distances and at points angling away from the direction in which the transmitting array was oriented. It was clearly proved, by the foregoing and by disconnect tests, that the television signals observed and measured in Bridgeport emanated from the booster station operated by the respondent.

12. 4/ From observations and measurements made by Engineers Dietsch and Arlowe, the boosters radiated in excess of the limits permitted for unlicensed operation of radio frequency energy radiating devices, as provided in Part 15 of the Commission's Rules. This part of the Commission's Rules sets forth the maximum signal radiation permitted any communication device without a station license being required. These rules presently provide that

4/ The findings contained in paragraph 12 of the Initial Decision have been deleted, for they involved matters irrelevant and immaterial to the decision and were based upon evidence of no probative value.

radiation from the device shall not exceed 15 microvolts per meter at a distance in feet from the apparatus of 157,000 divided by the frequency of radiation in kilocycles. At the frequencies used for television broadcasting on Channel 4, application of this formula would result in a limitation of radiation to a maximum of 15 microvolts per meter at a distance of approximately 2.35 feet from the transmitting antenna. Radiation was measured by the engineers as mounting to 3700 microvolts per meter at a distance of 200 feet from the booster transmitting antenna for Channel 4 and 6000 microvolts per meter at 200 feet from the Channel 6 booster transmitting antenna. Under the proposed amendments to Part 15 of the Rules, the maximum radiation for unlicensed communication devices at the frequency range here in question would be increased to 50 microvolts per meter at 100 feet. It is evident that the actual radiation from the boosters greatly exceeds this proposed limitation, as well as the existing one.

13. The records of the Commission indicate that Station KXLY-TV is operated on Channel 4 in Spokane with its transmitter located on top of Mt. Spokane, with authorized power of 48 kw visual and 26.9 kw aural, and that it is affiliated with the Columbia Broadcasting System and the DuMont television networks. Station KHQ-TV is operated on Channel 6 at Spokane with authorized power of 100 kw visual and 50 kw aural, with its antenna 3,143 feet above sea level, and it is affiliated with the National Broadcasting Company and the American Broadcasting Company television networks. It is found also that Stations KXLY-TV and KHQ-TV broadcast network television programs which, although their signals travel entirely in the State of Washington in reaching Bridgeport and in reaching Dyer Mountain, are originated outside the State of Washington and are transmitted by common carrier lines or microwave relays across state lines to Spokane for broadcast purposes. As the Examiner officially noticed (to which no exception was taken) the programs of these stations include: film that moves by mail and otherwise in commerce among the states; news reports and special events nationally and internationally gathered and distributed; and commercial messages designed to affect the sale and distribution of products that move in interstate commerce. The Bridgeport booster station signal does not detectably extend beyond the borders of the State of Washington. The radiated power is so low that no hazards of reflected sky-wave interference exist. It was stipulated and agreed by statements made on the record that no person who has adjusted, installed or otherwise operated the Bridgeport booster holds a radio operator license issued by the Commission authorizing the operation of a television transmitting station; similarly, it was agreed that express authority for rebroadcasting the KXLY-TV and KHQ-TV programs has not been received by the respondent from the licensees of those stations, and further, that representatives of those licensees have informed the respondent that they would have no objection to authorizing such rebroadcasts when and if the booster station should be licensed or otherwise sanctioned by the Commission.5/ Application has not been made for, and the Commission has not issued, a construction permit or license for the Bridgeport booster station; the Rules and Standards do not now provide for the licensed operation of such an installation.

5/ The above stipulation reserved for the respondent its contention that rebroadcast permission is not required, and reserved for Commission counsel his contention that the licensees' willingness to grant permission is not material.

Conclusions

1. The Commission's order of March 30, 1955, on the premises stated in the first paragraph of this Decision, directed, pursuant to Section 312(c) of the Communications Act, 6/ that a hearing be held in order to determine whether a cease and desist order should be issued to compel suspension of the television booster station operations described in the Findings of Fact. Thus, the ultimate question is: should a cease and desist order be issued on the basis of the evidence in this hearing record and in the light of the arguments presented in the pleadings filed by the parties? In answering this question, it behooves us to consider first the major premise upon which the Initial Decision rests and to appraise it in the light of the extensive and vigorous exceptions of Commission's counsel. The Examiner's position is perhaps most succinctly stated in paragraph 16 of the Initial Decision where he says, in part:

> "...If it should appear that the booster operation ought to be restrained then the questions of statutory and constitutional authority of the Commission would need to be examined; conversely, those legal questions need not be expounded if the circumstances here presented do not warrant the assertion and exercise of regulatory authority..."

2. The Examiner's views as characterized by the above quote are erroneous; the Commission does not, as the Examiner infers it does, have the discretion to permit those radio transmitters which are required by the Communications Act to be operated only under the licensing authority of the Commission to continue unlicensed operation merely because of any belief the Commission might have that the congressional mandate should not, as a policy matter, be applied to a particular factual situation. It is thus incorrect to state that the questions of the statutory and constitutional authority of the Commission need only be examined if it has already been determined on equitable grounds that the booster operations involved should be restrained. If, in fact, these operations are of the type coming within Section 301 of the Act they must be conducted under the licensing system set forth in the Act.

6/ The pertinent provisions of Section 312 of the Act are:

> "(b) Where any person...(2) has violated or failed to observe any of the provisions of this Act, or (3) has violated or failed to observe any rule or regulation of the Commission authorized by this Act. . ., the Commission may order such person to cease and desist from such action.
>
> "(c) Before. . .issuing a cease and desist order pursuant to subsection (b), the Commission shall serve upon the . . .person involved an order to show cause why. . .a cease and desist order should not be issued. Any such order to show cause shall contain a statement of the matters with respect to which the Commission is inquiring and shall call upon said. . .person to appear before the Commission at a time and place stated. . .and give evidence upon the matter specified therein;. . .If after hearing, or a waiver thereof, the Commission determines that. . .a cease and desist order should issue, it shall issue such order, which shall include a statement of the findings of the Commission and the grounds and reasons therefor and specify the effective date of the order, and shall cause the same to be served on said. . .person.
>
> "(d) In any case where a hearing is conducted pursuant to the provisions of this section, both the burden of proceeding with the introduction of evidence and the burden of proof shall be upon the Commission."

3. From our review of the Initial Decision, it appears to us that the nature of the proceeding has been misconstrued. This is quite evident in paragraph 17 of the Initial Decision, for the question before the Commission is not whether a booster station of the type here involved would serve the public interest, but whether such a booster station may operate without a license, without securing rebroadcast permission, or without licensed operators. Whether a booster station would serve the public interest is a question which would be relevant to a determination of whether the Commission should adopt rules to provide for the licensing of such a service, but the possibility of making a showing to justify establishment of a new service does not warrant any person anticipating such action and establishing a station without benefit of any license. To hold otherwise would be to overturn the entire theory of the Communications Act and to give free rein to every person who believes he has a proper use for radio to establish an operating radio station in advance of any Commission determination of the general need for, and feasibility of, such an operation. Considerations of whether the detrimental effects of the admitted interference between the booster stations and direct reception of authorized television signals are or are not outweighed by the alleged benefits of the augmented service made possible by the boosters are irrelevant to a determination as to whether an unlicensed operation causing interference to authorized service should be allowed to continue operation.

4. The preceding paragraphs explain in sufficient detail the basic reasons for our disagreement with the conclusions drawn by the Examiner. Attention is directed now to the conclusions which in the Commission's judgment are the proper ones for the disposition of this case. Basically, these are the conclusions proposed by Commission Counsel in his pleadings and in oral argument before us.

5. The respondent through its officers and agents has established and put into operation on Dyer Hill, approximately 4 miles northwest of Bridgeport, Washington, apparatus for the transmission of energy by radio and communications by radio within the meaning of those terms as defined in Sections 3(b) and (d) of the Communications Act of 1934, as amended. These devices, which transmit television signals on Channels 4 and 6, are not and have never been licensed by the Commission. They radiate far more energy than that specified by either the existing or the proposed Part 15 of the Commission's Rules as the maximum permissible radiation at this frequency range without benefit of a license from the Commission. On Channel 4 the apparatus radiates a video signal providing a roughly coneshaped 15 uv/m contour eight to ten miles deep and five miles wide at the broadest part of the cone.

6. While as a matter of propagation theory some signal from the two booster transmitting antennas of a very minor intensity extends beyond the state and international borders of the State of Washington, such signal is not of a strength to be measurable. On the other hand, the signal from the boosters have caused "ghost" image interference to the direct reception of the Spokane stations, on the outskirts of Bridgeport on the edge of the cone of the usable signal from the boosters described above. It has been possible to eliminate this interference through reorientation of the antennas of the television receivers. It was established that irrespective of the particular orientation of the booster transmitter there would always exist an area located on the side of the cone created by the booster signal farthest away from the originating station within which area "ghost" image interference would be received which could not be turned out by reorienting the television receiver antenna. This would be because the critical angle in such area between the signal from the booster and the signal direct from the station would be less than that within which even the highly directional receiving antennas would be able through orientation to distinguish between wanted and unwanted signals.

7. In view of this interference between direct reception and indirect booster reception of the Spokane stations' signals, it is clear that the instant operations fall squarely within the provisions of Section 301(d) of the Communications Act prohibiting unlicensed operation or use of radio transmission apparatus where such transmissions cause interference to the

"reception of energy, communications or signals from ... places beyond the borders of said State." The existence of this violation is clear for although these signals are being received in Bridgeport, Washington, from transmissions broadcast by stations located in Washington, both of the Spokane stations are affiliated with national networks (KXLY-TV, Channel 4 with Columbia Broadcasting System and Dumont Television Network; KHQ-TV, Channel 6 with National Broadcasting Company). Our findings show that these transmissions, thus received in Bridgeport, include network programs originating outside the State of Washington and transmitted by common carrier lines or microwave relays across state lines to Spokane; film moving by mail and otherwise in interstate commerce; news reports and events nationally and internationally gathered and distributed; and commercial messages designed to affect the sale and distribution of products moving in interstate commerce. Therefore, in a very real sense the interference which is caused to direct reception by the booster's operation and which is both endemic and, in part uncorrectible, is to the reception of communications or signals "from places beyond the borders of said State." See Lorain Journal v. United States, 342 U.S. 143 (1951).

8. The necessity for license by no means rests upon the establishment of such interference, however. The first sentence of Section 301 of the Communications Act makes clear that "It is the purpose of this Act, among other things, to maintain the control of the United States over all the channels of interstate and foreign radio transmission; and to provide for the use of such channels ... by persons for limited periods of time, under licenses granted by federal authority ..." It is in light of this fundamental statement of the all-embracing scope of federal licensing authority that the more specific provisions of the second sentence of the section must be read. So considered, it becomes obvious that transmissions of the magnitude of those from the instant booster stations, which are capable of casting a usable television signal over an area extending as much as nine miles from the transmission source, have extremely vital and real "effects," within the meaning and intent of Section 301(d), extending beyond the State of Washington even though no measurable signal from such stations may traverse the State's boundaries.

9. The validity of the foregoing proposition stems, of course, from the fact that the Commission cannot "maintain control" over the vital interstate television channels involved in this proceeding if they can be occupied at will in the interior of the large states by unlicensed booster stations. Conceivably, such stations may be so located as to avoid actual interference with the signals of licensed stations operating on the same channel, or even potential interference with the signals of not yet existing stations which might be constructed on that channel in communities which have been assigned channels. However, in the absence of a licensing system based upon fixed engineering principles, each such actual or potential interference to licensed services from such booster stations will be purely fortuitous.7/ Of even greater importance are the inhibitions placed by such unlicensed, unplanned operations upon the essential freedom of action on the part of the Commission in rule making proceedings looking towards new and improved uses of the channels upon which they have chosen to intrude.

7/ The fact that the Commission in Parts 15 and 18 of its rules has laid down certain conditions of extremely low power operations under which it will be presumed (in the absence of actual interference) that no adverse effects will result to licensed radio operations is, of course, no justification for the establishment of unlicensed operations which, as these, do not come close to meeting these limitations. Operations consistent with the Commission's expert judgment as to their effects upon authorized services obviously are not a justification for inconsistent operations. Nor can the Commission's judgment as to the exact limitations on unlicensed operation be collaterally attacked by ignoring these fixed limitations since it is clear from both the Act and the rules themselves that the alternative to operation within the prescribed limitations specified in the low power rules is licensed, rather than unlicensed, operation.

10. Thus, there is no merit to the proposition that such unlicensed operation does not have any adverse effects upon the Commission's maintenance of control over the channels of interstate and foreign radio transmission so long as they do not actually cause interference with established and licensed radio facilities. This argument that unlicensed booster stations may continue in operation until such time as they actually cause interference, and that only their continued operation after the occurrence of such interference is unlawful, ignores the fact that the Commission's over-all regulatory authority with respect to licensed services, including changes and additions therein, cannot be exercised with any substantial degree of efficiency if such authority is impeded as a result of the existence of unlicensed and often unknown operations standing in the way. Moreover, it ignores the fact that while it is feasible, under some carefully limited circumstances, to license stations, or classes of stations, on a secondary, non-interference basis to the primary users of a frequency, this feasibility is based upon the control the Commission has over its licensees -- a control it, of course, does not have over those who assume to themselves the Commission's allocation functions. It must also be remembered that the argument for unlicensed operation in the absence of interference proves too much: were it sound it would open the door to almost limitless unlicensed appropriation of unused or sparsely used space in the microwave portions of the radio spectrum where line of sight transmissions, or less, are the maximum available.

11. Any doubt as to the validity of these conclusions is effectively disposed of by examination of the legislative history and judicial construction of the Communications Act. The hearings on the bill which became the Radio Act of 1927 and the bills preceding it, conclusively demonstrate that, in recognition of the federal ownership of what was then referred to as the "ether," as well as the inherent interstate nature or effect as to all radio communications, the Act was consciously drafted to extend to the "constitutional limit" of federal power. See Hearings on S. 1754, 69th Cong. 1st Sess., pp. 101-102 (testimony of Department of Commerce Solicitor, Stephen P. Davis, Jr.); Hearings on H.R. 5589, 69th Cong., 1st Sess., pp. 10-11, 19-21 (testimony of Mr. Davis, Secretary of Commerce Hoover, and statement of Representative White). In the light of this clear intent to maintain federal control over radio communication, in the words of Solicitor Davis, "both interstate and foreign and intrastate insofar as it may in any way interfere with interstate or foreign commerce", the scope of the section cannot be constricted by reference to the different propagation characteristics of the frequencies then considered useful for radio communication and the higher frequencies our expanded technology have since brought into play. (Emphasis added) Moreover, the court cases which bear on this point, from Whitehurst v. Grimes, 21 F. 2d 787, decided in 1927, through Dumont v. Carroll, 184 F. 2d 153, cert, den., 340 U.S. 929, and Lorain Journal v. United States, 342 U.S. 143, decided in 1950 and 1951 respectively, all concur as to the plenary licensing authority of the Commission. (See also Technical Radio Laboratory v. Federal Radio Commission, 36 F. 2d 111; WBT v. Poulnot, 46 F. 2d 671; Federal Radio Commission v. Nelson Brothers, B. & S. Co., 289 U.S. 266 (1932); United States v. Betteridge, 43 F. Supp. 53). The recent decisions of the Supreme Court interpreting the scope and extent of the Commerce Clause of the Constitution make clear that no substantial constitutional issue exists as to the power of Congress to confer these licensing powers on the Commission. See Houston, East & West Texas Ry. Co. v. United States, 234 U.S. 342 (1913, "Shreveport" case); United States v. Wrightwood Dairy Co., 315 U.S. 110 (1942); Moore v. Mead's Fine Bread Co., 348 U.S. 115.

12. It is clear, therefore, that the respondent has been and is operating apparatus for the transmission of radio energy and communications in violation of Section 301. Since this is true, and in view of the undisputed facts as to these matters, it is equally clear that respondent has been and is operating such apparatus in violation of Section 318 of the Communications Act which prohibits operation of any radio station for which a license is required by persons who do not also hold operator's licenses of the proper grade, with no waiver or modification permitted for broadcasting stations. It is also apparent that respondent has acted in violation of the

provisions of Section 325(a) inasmuch as it has not received the express authority of the two Spokane stations to rebroadcast their programs.

13. The desire of members of the respondent corporation and other Bridgeport residents for better television service than could have been received directly from the Spokane stations, while understandable, does not alter the fact that the method by which they have chosen to achieve their objective is illegal and that they have continued to operate in this illegal manner in spite of repeated warnings and admonitions by the Commission. It is clearly destructive of any proper governmental control over these valuable frequencies to permit any person or group of persons to decide for themselves what types of operation should or should not be permitted. Accordingly a cease and desist order should be issued prohibiting the respondent or its agents from operating or in any way participating in the operation of the unlicensed booster stations now located on Dyer Hill near Bridgeport, or in other locations in or around Bridgeport.

14. Accordingly, IT IS ORDERED, This 23rd day of February, 1956, that C. J. Community Services, Inc., and any and all agents thereof SHALL CEASE AND DESIST (a) from operating television broadcast stations without having first obtained a license from this Commission; (b) from carrying on the operation of said stations without a person holding an appropriate operator's license from this Commission; and (c) from rebroadcasting the programs or parts thereof of television broadcast station KXLY-TV, Channel 4, KHQ-TV, Channel 6, or any other television station without having first obtained from the originating station express authority to do so. IT IS FURTHER ORDERED, That March 5, 1956 shall be the effective date of this order and a copy hereof shall be served upon the respondent.

FEDERAL COMMUNICATIONS COMMISSION

Mary Jane Morris
Secretary

Released: February 24, 1956